

State of Colorado  
Oil and Gas Conservation Commission

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Document Number:  
402963156  
Receive Date:  
03/17/2022  
Report taken by:  
Steven Arauza

Site Investigation and Remediation Workplan (Initial Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by COGCC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

OPERATOR INFORMATION

Name of Operator: <u>LARAMIE ENERGY LLC</u>	Operator No: <u>10433</u>	Phone Numbers Phone: <u>(970) 9019007</u> Mobile: <u>(970) 9019007</u>
Address: <u>1700 LINCOLN ST STE 3950</u>		
City: <u>DENVER</u>	State: <u>CO</u>	Zip: <u>80203</u>
Contact Person: <u>Matt Kasten</u>	Email: <u>mkasten@laramie-energy.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 22772 Initial Form 27 Document #: 402963156

PURPOSE INFORMATION

- Rule 913.c.(1): Pit or Cuttings Trench closure.
- Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- Rule 913.g: Changes of Operator.
- Rule 915.b: Request to leave elevated inorganics in situ.
- Other: \_\_\_\_\_

SITE INFORMATION

Yes  Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>335203</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>CC 0697-16D Pad</u>	Latitude: <u>39.516896</u>	Longitude: <u>-108.222768</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>16</u>	Twp: <u>6S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>
Facility Type: <u>SPILL OR RELEASE</u>	Facility ID: <u>481628</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>697-16D Tank Battery Failure</u>	Latitude: <u>39.516523</u>	Longitude: <u>-108.223356</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSE</u>	Sec: <u>16</u>	Twp: <u>6S</u>	Range: <u>97W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

## **SITE CONDITIONS**

General soil type - USCS Classifications GC

Most Sensitive Adjacent Land Use non crop land

Is domestic water well within 1/4 mile? No

Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

### **Other Potential Receptors within 1/4 mile**

Dry drainage (Stormwater dependent) located ~200' south of site. Elevation from working surface ~7,005' and elevation of dry drainage ~6,825' (180' difference). It is assumed groundwater at site and failure point is greater than 20'. A drill rig is scheduled to begin delineation and correct data will be collected during assessment.

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste  | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input type="checkbox"/> Produced Water        | <input type="checkbox"/> Workover Fluids             | _____                                  |
| <input type="checkbox"/> Oil                   | <input type="checkbox"/> Tank Bottoms                |  |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids       | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings        | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) | _____                                  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	TBD	soil sampling

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

A scheduled loadout from 3rd party water truck driver was scheduled for 2/14/2022, and notified Laramie that no contents were within tanks. Field personnel arrived to inspect and found a leaking frost free valve was leaking inside lined secondary containment. Liner failure was identified and no free fluids were held within containment. Some residual condensate is being recovered from working surface but it is assumed a majority of the fluid is below the tank battery. Tank and containment removal is pending. Initial soil sample Chris, collected at point of release 2/15/2022 and will be analyzed for Table 915. Data collected from initial sampling is still pending and will be presented in supplemental form 27(s).

## PROPOSED SAMPLING PLAN

### Proposed Soil Sampling

Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

1 soil sample was collected at surface point of release for 915 along with a surface water ~4.5 miles south of site (only location that surface water is present). During delineation samples will be field screened and sampled for 915. See attached Proposed drilling report and diagram for additional information on soil sampling proposal.

### Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

During drilling delineation; if groundwater is encountered it will be sampled and analyzed for 915. See attached drilling diagram for initial delineation proposal.

### Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

Surface water is being monitored daily ~ 4.5 miles from site (only present surface water). Initial sampling results are pending and will be presented when data is received, during initial sampling event no sheen or odor was noted. Surface water visualization will continue and if changes are noted a sample will be collected.

### Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

See attached drilling proposal.

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

Soil	NA / ND
Number of soil samples collected <u>1</u>	-- Highest concentration of TPH (mg/kg) <u>7594</u>
Number of soil samples exceeding 915-1 <u>1</u>	-- Highest concentration of SAR <u>40.7</u>

Was the areal and vertical extent of soil contamination delineated? No

BTEX > 915-1 Yes

Approximate areal extent (square feet) 2000

Vertical Extent > 915-1 (in feet) 1

**Groundwater**

Number of groundwater samples collected 0

Highest concentration of Benzene (µg/l) \_\_\_\_\_

Was extent of groundwater contaminated delineated? No

Highest concentration of Toluene (µg/l) \_\_\_\_\_

Depth to groundwater (below ground surface, in feet) \_\_\_\_\_

Highest concentration of Ethylbenzene (µg/l) \_\_\_\_\_

Number of groundwater monitoring wells installed \_\_\_\_\_

Highest concentration of Xylene (µg/l) \_\_\_\_\_

Number of groundwater samples exceeding 915-1 \_\_\_\_\_

Highest concentration of Methane (mg/l) \_\_\_\_\_

**Surface Water**

0 Number of surface water samples collected

       Number of surface water samples exceeding 915-1

If surface water is impacted, other agency notification may be required.

**OTHER INVESTIGATION INFORMATION**

Were impacts to adjacent property or offsite impacts identified?

\_\_\_\_\_

Were background samples collected as part of this site investigation?

Backgrounds will be collected as part of this project.

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards) \_\_\_\_\_

Volume of liquid waste (barrels) \_\_\_\_\_

Is further site investigation required?

See attached Drilling proposal.

**REMEDIAL ACTION PLAN**

**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

After drill delineation did not identify impacts below 20'bgs, source removal will begin with heavy equipment.

**REMEDIATION SUMMARY**

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Drilling delineation did not identify impacts beyond 20' bgs, excavation and disposal will occur or source area. Estimated NFA is late spring (April - May 2022).

**Soil Remediation Summary**

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Yes Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ If Yes: Estimated Volume (Cubic Yards) 600

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Land Treatment

\_\_\_\_\_ Bioremediation (or enhanced bioremediation)

\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Other \_\_\_\_\_

### Groundwater Remediation Summary

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )  
\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

### GROUNDWATER MONITORING

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

If groundwater is encountered during delineation, samples will be collected and analyzed for 915. TBD - after initial soil investigation.

## REMEDIATION PROGRESS UPDATE

### PERIODIC REPORTING

**Approved Reporting Schedule:**

Quarterly     Semi-Annually     Annually     Other   

**Request Alternative Reporting Schedule:**

Semi-Annually     Annually     Other   

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

**Report Type:**     Groundwater Monitoring     Land Treatment Progress Report     O&M Report  
 Other \_\_\_\_\_

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? \_\_\_\_\_

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_

E&P waste (solid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

# RECLAMATION PLAN

## RECLAMATION PLANNING

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

Reclamation will not be part of this project; if reclamation is needed, 1000 series rules will be followed.

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

Interim  Final

Did the Surface Owner provide the seed mix? \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

## SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 02/15/2022

Proposed site investigation commencement. 03/07/2022

Proposed completion of site investigation. \_\_\_\_\_

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

Proposed date of completion of Remediation. \_\_\_\_\_

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

**OPERATOR COMMENT**

Initial form 27; proposed boring/drilling plan attached. Once REM # is established, Spill 481628 will be requested closure and work will proceed under approved REM. Documentation and reports of work completed are being drafted along with delayed analytical. All reporting will be presented on supplemental form 27(s) when completed.

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed:  Matt Kasten

Title:  Project Manager

Submit Date:  03/17/2022

Email:  mkasten@laramie-energy.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Steven Arauza

Date:  04/12/2022

Remediation Project Number:  22772

**Condition of Approval****COA Type****Description**

	Operator shall collect sample(s) from comparable, nearby non-impacted native soil for purposes of establishing background soil conditions including pH, electrical conductivity (EC) and sodium adsorption ratio (SAR), per Rule 915.e.(2).D.
	Per Rule 913.b.(2), the Operator will conduct sampling and analysis of soil, and groundwater--if encountered, to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1 for soil and groundwater. The Operator shall analyze samples for the complete Table 915-1 list and shall delineate the extent of impacts using the Table 915-1 Protection of Groundwater Soil Screening Level Concentrations.
	Continue to monitor downstream surface water and report quarterly groundwater sampling results via a Supplemental Form 27.
	Submit Supplemental eForm 19 to request closure of Spill/Release ID #481628. Supplemental report shall comply with outstanding COAs, indicate that work is proceeding under an approved eForm 27 and shall reference the Remediation Project number assigned upon approval of this report.

4 COAs

**Attachment Check List**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

**Att Doc Num****Name**

402963156	FORM 27-INITIAL-SUBMITTED
402963915	SOIL SAMPLE LOCATION MAP
402963917	SITE MAP
402971805	REMEDIAL ACTION PLAN
402972087	SOIL SAMPLE LOCATION MAP
402988013	ANALYTICAL RESULTS
402988014	ANALYTICAL RESULTS
402988016	ANALYTICAL RESULTS
402988017	ANALYTICAL RESULTS

Total Attach: 9 Files

**General Comments****User Group****Comment****Comment Date**

Environmental	Updated Site Information to include Spill/Release ID #481628.	03/16/2022
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Total: 1 comment(s)